

WHAT IS CLAIMED IS:

- 1                   1.       A method of identifying an agent that binds to CCX-CKR2 on a cell,  
2   the method comprising,  
3                   contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an  
4   extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a  
5   SDF1 or I-TAC-binding fragment thereof; and  
6                   selecting an agent that competes with I-TAC or SDF1 for binding to the CCX-  
7   CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to CCX-  
8   CKR2 on a cell.
- 1                   2.       The method of claim 1, wherein the cell is a cancer cell.
- 1                   3.       The method of claim 1, further comprising testing the selected agent  
2   for the ability to bind to, or inhibit growth of, a cell.
- 1                   4.       The method of claim 3, wherein the cell is a cancer cell.
- 1                   5.       The method of claim 1, further comprising testing the selected agent  
2   for the ability to alter kidney function.
- 1                   6.       The method of claim 1, further comprising testing the selected agent  
2   for the ability to alter brain or neuronal function.
- 1                   7.       The method of claim 1, further comprising testing the selected agent  
2   for the ability to change cell adhesion to endothelial cells.
- 1                   8.       The method of claim 1, wherein the agent is less than 1,500 daltons.
- 1                   9.       The method of claim 1, wherein the agent is an antibody.
- 1                   10.      The method of claim 1, wherein the CCX-CKR2 polypeptide  
2   comprises the sequence displayed in SEQ ID NO:2.
- 1                   11.      A method for determining the presence or absence of a cancer cell, the  
2   method comprising,  
3                   contacting a sample comprising a cell with an agent that specifically binds  
4   with SEQ ID NO:2; and

5 detecting binding of the agent to a polypeptide in the sample, wherein binding  
6 of the agent to the sample indicates the presence of a cancer cell.

1 12. The method of claim 11, wherein the agent is an antibody.

1 13. The method of claim 11, wherein the agent is less than 1500 daltons.

1 14. The method of claim 11, wherein the polypeptide detected is SEQ ID  
2 NO:2

1 15. The method of claim 11, wherein the sample is from a human.

1 16. The method of claim 11, wherein the method is used to diagnose  
2 cancer in a human.

1 17. The method of claim 11, wherein the method is used to provide a  
2 prognosis of cancer in a human.

1 18. The method of claim 11, wherein the cancer is selected from the group  
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and  
3 leukemia.

1 19. The method of claim 11, wherein the cancer is not Kaposi's sarcoma,  
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.

1 20. The method of claim 11, wherein the antibody competes with SDF1  
2 and I-TAC for binding to SEQ ID NO:2.

1 21. A method of providing a diagnosis or prognosis of an individual  
2 having cancer, the method comprising detecting the presence or absence of expression of a  
3 polynucleotide encoding a CCX-CKR2 polypeptide in a cell of an individual, wherein the  
4 CCX-CKR2 polypeptide binds I-TAC and/or SDF1 and the CCX-CKR2 polypeptide is at  
5 least 95% identical to SEQ ID NO:2, thereby diagnosing a cancer in the individual.

1 22. The method of claim 21, wherein the CCX-CKR2 polypeptide is  
2 displayed in SEQ ID NO:2.

1                   23.     The method of claim 21, wherein the cancer is selected from the group  
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and  
3 leukemia.

1                   24.     The method of claim 21, wherein the cancer is not Kaposi's sarcoma,  
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.

1                   25.     An antibody that specifically competes with SDF-1 and I-TAC for  
2 binding to SEQ ID NO:2.

1                   26.     The antibody of claim 25, wherein the antibody is a monoclonal  
2 antibody.

1                   27.     The antibody of claim 25, wherein the antibody is a humanized  
2 antibody.

1                   28.     A method comprising,  
2                   contacting a cell with an agent that specifically binds to SEQ ID NO:2,  
3 wherein the agent competes with SDF-1 and I-TAC for binding to a CCX-CKR2 polypeptide,  
4 and wherein the cell expresses a CCX-CKR2 polypeptide comprising an extracellular domain  
5 at least 95% identical to an extracellular domain of SEQ ID NO:2, thereby binding the agent  
6 to the CCX-CKR2 polypeptide on the cell.

1                   29.     The method of claim 28, wherein the agent is less than 1,500 daltons.

1                   30.     The method of claim 28, wherein the agent is an antibody.

1                   31.     The method of claim 28, wherein the CCX-CKR2 polypeptide is as  
2 displayed in SEQ ID NO:2.

1                   32.     The method of claim 28, wherein the agent is identified by a method  
2 comprising  
3                   contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an  
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a  
5 SDF1 or I-TAC-binding fragment thereof; and

6                    selecting an agent that competes with I-TAC or SDF-1 for binding to the  
7 CCX-CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to a  
8 cancer cell.

1                    33.     A method of treating cancer in an individual, the method comprising  
2 administering to the individual a therapeutically effective amount of an agent that competes  
3 with SDF1 and I-TAC for binding to SEQ ID NO:2.

1                    34.     The method of claim 33, wherein the agent is less than 1,500 daltons.

1                    35.     The method of claim 33, wherein the agent is an antibody.

1                    36.     The method of claim 33, wherein the agent is identified by a method  
2 comprising  
3                    contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an  
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a  
5 SDF1 or I-TAC-binding fragment thereof; and  
6                    selecting an agent that competes with I-TAC or SDF-1 for binding to the  
7 CCX-CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to a  
8 cancer cell.

1                    37.     The method of claim 33, wherein the cancer is selected from the group  
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and  
3 leukemia.

1                    38.     The method of claim 33, wherein the cancer is not Kaposi's sarcoma,  
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.